

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

In re Patent Application of:

Confirmation No.: 7190

Frank Athari

Date: August 26, 2008

Serial No.: 10/650,246

Group Art Unit: 2836

Filed: August 28, 2003

Examiner: Michael Rutland Wallis

For: ACTIVE EMI FILTER FOR POWER SUPPLY OUTPUT

VIA EFS-WEB

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

REPLY TO EXAMINER'S ANSWER MAILED JUNE 26, 2008

Sir:

This Reply to Examiner's Answer is in support of the Appeal Brief filed on May 20, 2008, which concerns the propriety of the Examiner's final Office Action mailed December 21, 2007 and Examiner's Answer mailed June 26, 2008 in connection with the above-identified patent application.

STATUS OF CLAIMS:

Claims 2-13 are pending. Claims 2-13 have been rejected and are involved in the instant appeal. Claim 1 has been canceled.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL:

The following grounds of rejection are presented for review:

A. Rejection under 35 U.S.C. §103(a)

Claims 3-6 and 8-13 have been rejected under 35 U.S.C. §103(a) as being anticipated by U.S. Patent No. 6,636,107 to Pelly (“Pelly ‘107”) in view of U.S. Patent No. 6,700,806 to Kolar (“Kolar”).

B. Rejection under 35 U.S.C. §103(a)

Claims 7-8 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,690,230 to Pelly (“Pelly ‘230”) in view of U.S. Patent No. 5,731,689 to Sato (“Sato”).

C. Rejection under 35 U.S.C. §103(a)

Claim 2 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Pelly ‘230 in view of Sato in further view of U.S. Patent No. 6,067,243 to Suzuki et al.

D. Rejection under 35 U.S.C. §103(a)

Claim 2 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Pelly ‘107 in view of Kolar in further view of U.S. Patent No. 5,668,464 to Ohkawa et al. (“Ohkawa”).

ARGUMENT:

A. Rejection under 35 U.S.C. §103(a)

Claims 3-6 and 8-13 should not be rejected under 35 U.S.C. §103(a) as being anticipated by U.S. Patent No. 6,636,107 to Pelly (“Pelly ‘107”) in view of U.S. Patent No. 6,700,806 to Kolar (“Kolar”).

In the Response to Argument section at page 9 of the Examiner’s Answer, the Examiner admits that the full bridge rectifier of Pelly ‘107, is not transistor based. As argued by the Applicant, this clearly distinguishes the invention of claim 8, which recites “the input terminals of the active EMI filter being connected to receive the output voltage of the power transistor switching stage” and that “the power transistor switching stage is a switch mode power supply.”

The Examiner, nevertheless, argues that the full bridge rectifier of Pelly ‘107 provides a switch mode conversion of an alternating current mode input to a direct current mode. This argument, however, does not change the fact that Pelly ‘107 does not teach, disclose, or suggest a power transistor switching stage being connected to provide voltage to the active EMI filter as in claim 8.

Moreover, the Examiner is wrong in stating that the four diodes of the full bridge of Pelly ‘107 are analogous to the power transistor switching stage of claim 8. While the function of the full bridge of Pelly ‘107 and of the power transistor switching stage of claim 8 is to provide voltage, the means of achieving this function and the voltage provided are not analogous or equivalent. While the full bridge provides an analog waveform, the transistors of the switching stage are switched between full saturation and full cutoff at a high rate resulting in a rectangular waveform. A conventional passive rectifier diode bridge of Pelly ‘107 cannot and does not provide a controllable rectangular waveform.

With regard to Kolar, the Examiner is wrong in that there is any motivation to combine Kolar, describing transistor switching and control of conduction, and Pelly ‘107. The invention of claim 8 is directed to an active EMI filter that cancels common mode current flowing between the input terminals connected to the power transistor switching stage and the output terminals.

The Examiner now states (see page 10 of the Examiner’s Answer) that those skilled in the art would have been motivated to substitute the full bridge of Pelly ’107 with the power transistors of three-phase voltage boost converter system of Kolar because “Kolar discloses that transistor switches are advantageous when compared to a diode bridge rectification

arrangement.” This fails to explain the motivation for those skilled in the art to provide a switching power supply placed ahead of an active EMI filter “connected to receive the output voltage of the power transistor switching stage” and “substantially eliminating any current due to the common mode current in the ground return line connected to the ground return line terminal” as recited in claim 8.

Thus, Pelly ’107 and Kolar do not render independent claim 8 and claims 3-6 and 9-13, which depend from claim 8, obvious.

B. Rejection under 35 U.S.C. §103(a)

Claims 7-8 should not be rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,690,230 to Pelly (“Pelly ‘230”) in view of U.S. Patent No. 5,731,689 to Sato (“Sato”).

Pelly ‘230 and Sato suffer from the same deficiencies as Pelly ’107 and Kolar discussed above. Sato teaching of transistors does not rise to a level of providing motivation for those skilled in the art to substitute the full bridge rectifier of Pelly ‘230 with the power transistors providing voltage to three-phases of a motor of Sato. The outcome of such substitution is unforeseen and there is no reasonable expectation of success, i.e., “substantially eliminating any current due to the common mode current in the ground return line connected to the ground return line terminal” as recited in claim 8.

Thus, Pelly ’230 and Sato do not render independent claim 8 and claim 7, which depends from claim 8, obvious.

C. Rejection under 35 U.S.C. §103(a)

Claim 2 should not be rejected under 35 U.S.C. §103(a) as being unpatentable over Pelly ‘230 in view of Sato in further view of U.S. Patent No. 6,067,243 to Suzuki et al.

The Examiner did not address the rejection of claim 2 in view of Suzuki et al. in the Examiner’s answer.

D. Rejection under 35 U.S.C. §103(a)

Claim 2 should not be rejected under 35 U.S.C. §103(a) as being unpatentable over Pelly ’107 in view of Kolar in further view of U.S. Patent No. 5,668,464 to Ohkawa et al.

The Examiner did not address the rejection of claim 2 in view of Ohkawa et al. in the Examiner's answer.

Claims 2-7 and 9-13 depend directly or indirectly from independent claim 8 and are, therefore, allowable for the same reasons, as well as because of the combination of features in those claims with the features set forth in the respective independent claims.

CONCLUSION:

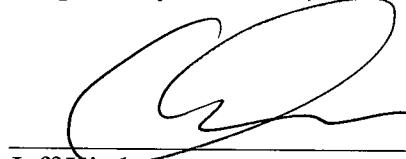
For the reasons set forth in the Appeal Brief dated May 20, 2008 and above, it is respectfully submitted that all rejections to the claims in this application have been addressed to clearly define over the prior art. Therefore, the Examiner is respectfully requested to reconsider the application and allow the case to issue.

In the event the actual fee is greater than the payment submitted or is inadvertently not enclosed or if any additional fee during the prosecution of this application is not paid, the Patent Office is authorized to charge the underpayment to Deposit Account No. 15-0700.

THIS CORRESPONDENCE IS BEING
SUBMITTED ELECTRONICALLY
THROUGH THE PATENT AND
TRADEMARK OFFICE EFS FILING
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LCD:JK:ck/jh

Respectfully submitted,



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